# The Cultural Sources of Acquisition Risk

# Part II

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n Part I of this article (*Defense AT&L*, September - October 2005), I argued that acquisition risks can be perceived through multiple lenses and that a cultural lens can often expose the underlying root causes of program risks. To substantiate my argument, I explored the first three of seven features of acquisition culture that are implicated in program risk: the reification of risk, the unreality of schedule, and the pretense of a stable requirements baseline. In Part II, I discuss the remaining four culprits. The consideration of all seven aspects is a starting point for cultivating a keener cultural viewpoint of the system in which we must work and succeed.

# The Avoidance of Adequate Reserve

Norman Augustine, the former CEO of Lockheed Martin, observed in his 1996 Woodruff Lecture:

The difference between a great manager and a good manager is reserves. With virtually all of the problems I've discussed, we find people who are operating under pressures related to time or money or both. Under such circumstances, there is a tendency to err on the side of whatever keeps the project on time or on budget—and this can be disastrous, as demonstrated by the Kansas City hotel walkways and the Challenger events. ... It seems clear that managing under uncertainty means managing with reserves. Financial reserves, schedule reserves, and performance reserves.

A lot of us agree with Augustine, yet our acquisition culture is designed to severely limit reserves. Industry students in DAU's PMT401 course consistently report that a management reserve of 10 percent is the upper limit that their corporate management will tolerate; there seems to be a belief that higher reserves would render them uncompetitive. Yet it seems clear that the amount of management reserve should reflect perceived uncertainties and risks, which may justify more than 10 percent.

Government PMT401 students report that they can't keep any reserve at their end. If they are fortunate enough to

have a reserve—for example, when the amount of contract award is less than what was budgeted—it is quickly swept away by other, under-funded programs.

One reported response is, "Build reserve in"—that is, design the work breakdown structure and the constituent work packages with sufficient funds to address contingencies, should they occur. The problem with this approach is that the reserve is implicit, scattered, and, therefore, difficult to access, allocate, and control.

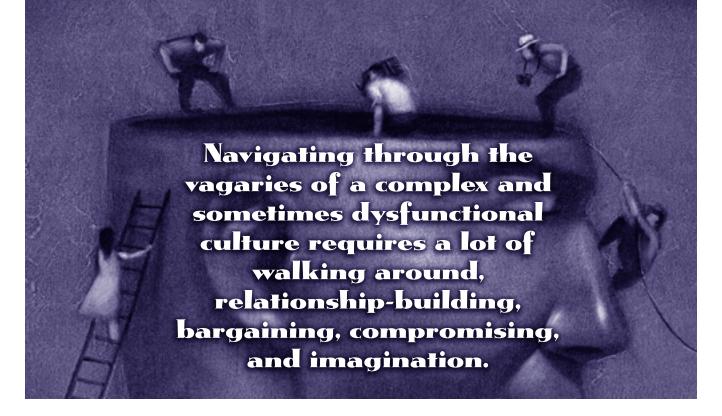
Numerous classroom discussions on this topic have suggested to me that program reserves actually take four distinct guises:

- 1.Confidence Reserve. An 80 percent confidence level dictates significantly longer schedule and higher cost than a 50 percent confidence. The higher confidence is a kind of reserve. The higher the required confidence, the more contingency time and contingency dollars are factored in.
- 2. Reserve between threshold and objective. As long as the plan is to fund and schedule for objectives, then the difference between threshold and objective is a reserve available to the PM.
- 3. Government PM's reserve—funded versus obligated. When the winning bid is less than the government budgeted for, the difference is a potential reserve, but only if the PM can hold on to this excess money.
- 4. Contractor's management reserve. The contractor will set aside, from the money that the government obligates, a certain amount for reserve.

The problem is that all four kinds of reserve seem to be in chronically short supply.

1. Confidence levels tend to be overstated at program inception, and when confidence in schedule declines, rather than replanning for higher confidence, the program may limp along with little chance of making its commitments.

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- 2. Thresholds may be substituted for objectives early in the program, erasing the reserve.
- 3. Funds not obligated are taken away.
- 4. The contractor uses its reserve to solve problems early in the program.

It is a seeming dysfunction of our acquisition culture that we can all agree with Augustine on the one hand, but cannot follow his advice on the other.

One avenue for future research is to compare the use of reserves between the United States defense acquisition system and that of Australia. In Australia, program managers are entitled to build a 20 percent level of reserve into their acquisition budgets, and the culture is such that that reserve is quarantined against other use. Research might reveal quantifiable benefits of the Australian system that would suggest useful changes in the U.S. system.

### Substantial Overtime as Standard Practice

Visit any high-visibility, ACAT I or II program office, and you will see the staff working extraordinarily long days. For many, a 50- to 60-hour week has become an established routine. The thinking often goes, "The office is understaffed, and the workload is growing. There's no alternative but to roll up our sleeves, brew some more coffee, and work late." This work ethic goes largely unchallenged. There appears to be a widespread belief in the acquisition culture that long hours go with the territory.

The cultural subtlety that may be overlooked is the extent to which this belief becomes self-fulfilling. Over time, schedules may implicitly assume 50-hour weeks. Over

time, people may become accustomed to forfeiting useor-lose vacations. And over time, it may become routine for people to think, at 10 a.m., "I don't need to work on that task right now. After all, I'll still be here at seven tonight, and I can work on it then, when things are quieter."

It seems to me reasonable to ask to what extent the 50-hour week is a cultural convention rather than a requisite reality? One avenue for future research would be to experiment with 40-hour offices—offices where the lights are turned out at 6 p.m., and the people forcibly ejected. Would such an office necessarily underperform its 50-hour brethren? Or is it possible the 40-hour office would adapt and get the work done anyway?

If a formal experiment is infeasible, researchers might identify acquisition programs (in other nations or industries) that discourage overtime then perform cross-cultural comparisons with U.S. defense acquisition. If such comparison revealed little difference in success, it might suggest that overtime in our culture is more of a self-ful-filling belief than a necessity.

## **Denunciation of Pessimists**

It's clear from both our PMT401 case studies and the spirited student discussions that ensue, that the ACAT I or II program office is no place for a pessimist. Perhaps more than any other quality, a can-do attitude is prized in such milieux. The problem is that a pervasive can-do attitude feeds people's tendency for optimistic estimation. In *Smart Choices: A Practical Guide to Making Better Decisions*, Hammond, Keeney, and Raiffa demonstrate that people habitually harbor exaggerated confidence in their own abil-

ities to estimate and to perform. This phenomenon explains, for example, why 90 percent of the workforce considers itself to be in the top 10 percent of performance.

When the same bias enters acquisition plans and schedules, it can be toxic. The problem is that an optimistic bias is so ingrained in the culture and into human nature itself, that it is hard to recognize and remove. A credible pessimist is perhaps the best antidote.

One class of projects seems to self-correct against optimistic bias. I call them "drop-dead projects." Projects that have an absolute drop-dead date that it is logically impossible to extend (spacecraft launch windows and repair of Y2K software bugs are two that come to mind) will temper optimism and trigger a sober, realistic appraisal.

An avenue for future research might be to compare dropdead programs to conventional ones, especially with respect to how pessimistic views are tolerated. Does tolerance of pessimism result in more accurate plans and schedules?

# Slipping in Chunks

Our tolerance for unreal schedules (see Part I) seems to guarantee that when reality finally does catch up, we won't slip the program schedule slightly but will restructure the program and delay delivery by six months or more. At the same time, it seems a matter of simple logic that a defense acquisition program gets six months behind by slipping a week at a time.

In the PMT401 cases that deal with restructuring of programs, the slips in schedule and the overruns in budget come in large, tectonic, earth-trembling chunks. Why is it that the defense acquisition culture seems to accommodate large quantum slips but won't acknowledge the week-long slips of which they are composed?

Our acquisition culture often admonishes PMs not to hide bad news but raise it quickly to the attention of higher management and other stakeholders. Yet at the same time, a week's slip (or two or three) in schedule doesn't seem to meet a culturally implicit threshold for replanning and advising program stakeholders. Six (or eight or 10) months rise to the occasion and will trigger the reporting of bad news to all concerned.

This phenomenon also relates to the prevalent spirit of optimism within a program office, which may lead the people to conclude that a delay of a week or two can be overcome during the months ahead (even though historically it rarely is). Only when the weeks add up to a substantial slip and it's extremely unlikely, if not impossible, to overcome the cumulative delay, does the bad news come out.

This might just be a harmless peculiarity of our culture, except that as we embrace systems-of-systems as the backbone of network-centric warfare, slippages in one program are the concern of many other programs. The Joint Tactical Radio System (JTRS) stands at the nexus of many weapon systems' implementation plans. So a slip in the delivery schedule for JTRS has long-reaching ripple effects. When a program's slippages emerge only in large chunks, it is severely disruptive to other programs that depend on it.

Researchers might consider finding and studying acquisition programs in other venues, such as foreign nations or commercial industry, that allow for replanning in smaller increments (slipping a week or two at a time). What benefits (if any) arise for the visibility and control of such projects? What detriments (if any) emerge?

### It's the Culture

"It's the culture, stupid." Bumper-sticker wisdom, perhaps, but that phrase may synthesize a key learning outcome of DAU's case-based course in defense acquisition.

I think one reason that students value their 10-week experience in PMT401 is that our cases expose sometimes subtle inconsistencies, foibles, fallacies, and other dysfunctions that lace the cultural landscape of defense acguisition. A case may expose a cultural assumption that has gone largely unquestioned and serve it up for questioning. Or it may highlight a practice that people undertake automatically and ask if there is a better way. Or it may describe a decision maker's tough call and ask if there was a way to reframe the problem so that a different option would emerge. In each instance, the culture of the acquisition system is under the microscope. In the process, our students learn to prepare for the potholes of defense acquisition culture before driving into them. They also learn how to adapt to cultural shocks as they occur and how to influence positive change in the acquisition culture over time.

I've also concluded that as long as important acquisition risks are rooted in the culture of defense acquisition, program management will remain largely an art. Navigating through the vagaries of a complex and sometimes dysfunctional culture requires a lot of walking around, relationship-building, bargaining, compromising, and imagination. Part of our job as educators at DAU is to help students master this art.

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